

Project Name/Location:

Contract Number: W9127N-05-C-0012

Columbia River Channel Improvement - RM 95+00-104+20.

Date: 11/23/2005

| <div>Dredging</div> <div><u>Load Number</u></div> <div>1374</div> <div><u>Tidal Stage</u></div> <div>Ebb</div> <div><u>Dredge State:</u></div> <div>Overflow through skimmers only</div> <div><u>Weather:</u></div> <div>Clear</div> <div><u>Wind:</u></div> <div>0-5 kts</div> <div><u>Seas:</u></div> <div>0-1'</div> <div><u>Disposal location</u></div> <div>Columbia River RM 101</div> | Sample Point | Depth (ft) | Time | X Coordinate | Y Coordinate | Turbidity (NTU) | DO (Mg/L) |
|--|---|------------|---------|---|--------------|----------------------|--|
| | DR-1 | 21.0 | 7:33:03 | 7634494.41 | 726832.76 | 4.6 | |
| | DR-2 | 20.2 | 7:35:46 | 7634197.28 | 727193.52 | 7.3 | 12.61 |
| | DR-2R1 | 20.5 | 7:35:49 | 7634193.19 | 727199.72 | 7.0 | 12.58 |
| | DR-4 | 21.1 | 7:36:18 | 7633560.03 | 727435.99 | 7.4 | |
| | DR-4R1 | 21.1 | 7:36:21 | 7633555.77 | 727436.11 | 7.2 | |
| | DR-3 | 20.7 | 7:40:49 | 7634692.54 | 726438.24 | 5.5 | |
| | DR-3R1 | 20.5 | 7:40:51 | 7634688.27 | 726438.36 | 5.4 | |
| Remarks: | | | | Action Taken: | | | |
| DR-2 exceeded 10% over background, taken in the plume. | | | | Re-test DR-2R1 was taken. | | | |
| DR-4 exceeded 10% over background, taken in the plume. | | | | Re-test DR-4R1 was taken. | | | |
| DR-3 exceeded 10% over background, taken out of plume on starboard side. | | | | Re-test DR-3R1 was taken. | | | |
| | | | | The dredge moved away from the area while continuing dredging to avoid further increasing the turbidity at the location where the exceedence was measured. The dredge coordinates were marked on the GPS screen to insure no further dredging occurred at the location where the exceedence was measured. | | | |
| Sample Point Key | All Tests Conducted With YSI 6600 | | | | | Turbidity Compliance | DO Compliance |
| DR-1 | Background - 100' Up Current, Within 600-Foot of Channel | | | | | OR WA WA | OR, WA Not Required Not Required |
| DR-2 | 100' Down Current | | | | | | |
| DR-3 | 300' Radially from point of dredge (Port or Starboard) | | | | | | |
| DR-4 | 900' Down Current from point of dredging | | | | | | |
| | | | | | | | |
| Rx | Indicates a Re-Test where (x) is the Re-Test number for that particular point | | | | | | |

Project Name/Location:

Contract Number: W9127N-05-C-0012

Columbia River Channel Improvement - RM 95+00-104+20.

Date: 11/23/2005

| Disposal Load Number 1374 Tidal Stage Ebb Dredge State: Split Hull Weather: Clear Wind: 0-5 kts Seas: 0-1' Disposal location Columbia River RM 101 | Sample Point | Depth (ft) | Time | X Coordinate | Y Coordinate | Turbidity (NTU) | DO (Mg/L) |
|--|--------------|------------|---------|--------------|--------------|-----------------|-----------|
| | DSP-1 | 20.9 | 8:20:54 | 7622669.45 | 735672.24 | 3.8 | |
| | DSP-2 | 20.6 | 8:33:07 | 7622889.58 | 735313.46 | 7.9 | 13.3 |
| | DSP-2R1 | 20.6 | 8:33:10 | 7622889.58 | 735313.46 | 8.5 | 13.2 |
| | DSP-3 | 20.8 | 8:34:03 | 7622943.93 | 734819.50 | 33.2 | |
| | DSP-3R1 | 20.6 | 8:34:06 | 7622948.36 | 734825.45 | 32.0 | |
| | DSP-4 | 21.0 | 8:36:02 | 7622921.27 | 735227.46 | 4.8 | |
| | DSP-4R1 | 20.9 | 8:36:05 | 7622917.18 | 735233.65 | 5.0 | |

| Remarks: | Action Taken: |
|---|---|
| DSP-2 exceeded 10% over background, taken in the plume. | Re-test DSP-2R1 was taken. |
| DSP-4 exceeded 10% over background, taken in the plume. | Re-test DSP-4R1 was taken. |
| DSP-3 exceeded 10% over background, taken out of plume | Re-test DSP-3R1 was taken. |
| on starboard side. | The disposal ended and the dredge moved away from the area. |
| | |

| Sample Point Key | All Tests Conducted With YSI 6600 | Turbidity Compliance | DO Compliance |
|------------------|---|----------------------|--|
| DSP-1 | Background - 100' Up Current, Within 600-Foot of Channel | OR WA WA | OR, WA Not Required Not Required |
| DSP-2 | 100' Down Current | | |
| DSP-3 | 150' Radially from point of dredge (Port or Starboard) | | |
| DSP-4 | 900' Down Current from point of dredging | | |
| Rx | Indicates a Re-Test where (x) is the Re-Test number for that particular point | | |

| | | | | | | | |
|--|---|-------------------|-------------|---|---------------------|-----------------------------|--|
| Project Name/Location: | | | | Contract Number: W9127N-05-C-0012 | | | |
| Columbia River Channel Improvement - RM 95+00-104+20. | | | | | | | |
| Date: 11/23/2005 | | | | | | | |
| Dredging <u>Load Number</u> 1375 Tidal Stage Ebb Dredge State: Overflow through skimmers only Weather: Clear Wind: 0-5 kts Seas: 0-1' Disposal location Columbia River RM 101 | Sample Point | Depth (ft) | Time | X Coordinate | Y Coordinate | Turbidity (NTU) | DO (Mg/L) |
| | DR-1 | 20.4 | 9:08:38 | 7633665.30 | 727542.52 | 4.5 | |
| | DR-2 | 20.9 | 9:10:27 | 7633001.67 | 728065.37 | 17.8 | 12.9 |
| | DR-2R1 | 20.9 | 9:10:30 | 7633001.67 | 728065.37 | 15.8 | 13.2 |
| | DR-4 | 20.8 | 9:12:04 | 7632509.40 | 728151.89 | 14.6 | |
| | DR-4R1 | 20.7 | 9:12:07 | 7632509.40 | 728151.89 | 14.4 | |
| | DR-3 | 20.3 | 9:15:17 | 7633537.72 | 727400.13 | 16.1 | |
| | DR-3R1 | 20.5 | 9:15:20 | 7633537.72 | 727400.13 | 13.7 | |
| Remarks: | | | | Action Taken: | | | |
| DR-2 exceeded 10% over background, taken in the plume. | | | | Re-test DR-2R1 was taken. | | | |
| DR-4 exceeded 10% over background, taken in the plume. | | | | Re-test DR-4R1 was taken. | | | |
| DR-3 exceeded 10% over background, taken out of plume, on starboard side. | | | | Re-test DR-3R1 was taken. | | | |
| | | | | The dredge moved away from the area while continuing dredging to avoid further increasing the turbidity at the location where the exceedence was measured. The dredge coordinates were marked on the GPS screen to insure no further dredging occurred at the location where the exceedence was measured. | | | |
| Sample Point Key | All Tests Conducted With YSI 6600 | | | | | Turbidity Compliance | DO Compliance |
| DR-1 | Background - 100' Up Current, Within 600-Foot of Channel | | | | | OR WA WA | OR, WA Not Required Not Required |
| DR-2 | 100' Down Current | | | | | | |
| DR-3 | 300' Radially from point of dredge (Port or Starboard) | | | | | | |
| DR-4 | 900' Down Current from point of dredging | | | | | | |
| Rx | Indicates a Re-Test where (x) is the Re-Test number for that particular point | | | | | | |

Project Name/Location:

Contract Number: W9127N-05-C-0012

Columbia River Channel Improvement - RM 95+00-104+20.

Date: 11/23/2005

| <div>Dredging</div> <div><u>Load Number</u></div> <div>1376</div> <div><u>Tidal Stage</u></div> <div>Ebb</div> <div><u>Dredge State:</u></div> <div>Overflow through skimmers only</div> <div><u>Weather:</u></div> <div>Clear</div> <div><u>Wind:</u></div> <div>0-5 kts</div> <div><u>Seas:</u></div> <div>0-1'</div> <div><u>Disposal location</u></div> <div>Columbia River RM 101</div> | Sample Point | Depth (ft) | Time | X Coordinate | Y Coordinate | Turbidity (NTU) | DO (Mg/L) |
|--|---|------------|----------|---|--------------|----------------------|--|
| | DR-1 | 20.8 | 10:53:16 | 7632992.73 | 727895.40 | 4.6 | |
| | DR-2 | 20.3 | 10:55:08 | 7632608.08 | 728173.49 | 14.1 | 13.3 |
| | DR-2R1 | 20.3 | 10:55:10 | 7632599.72 | 728179.80 | 13.4 | 13.3 |
| | DR-4 | 21.2 | 10:57:44 | 7631885.05 | 728242.07 | 18.5 | |
| | DR-4R1 | 20.8 | 10:57:50 | 7631872.26 | 728242.42 | 13.9 | |
| | DR-3 | 20.3 | 11:00:12 | 7633113.70 | 727642.82 | 4.7 | |
| Remarks: | | | | Action Taken: | | | |
| DR-2 exceeded 10% over background, taken in the plume. | | | | Re-test DR-2R1 was taken. | | | |
| DR-4 exceeded 10% over background, taken in the plume. | | | | Re-test DR-4R1 was taken. | | | |
| DR-3 taken out of plume, on starboard side. | | | | | | | |
| | | | | The dredge moved away from the area while continuing dredging to avoid further increasing the turbidity at the location where the exceedence was measured. The dredge coordinates were marked on the GPS screen to insure no further dredging occurred at the location where the exceedence was measured. | | | |
| Sample Point Key | All Tests Conducted With YSI 6600 | | | | | Turbidity Compliance | DO Compliance |
| DR-1 | Background - 100' Up Current, Within 600-Foot of Channel | | | | | OR WA WA | OR, WA Not Required Not Required |
| DR-2 | 100' Down Current | | | | | | |
| DR-3 | 300' Radially from point of dredge (Port or Starboard) | | | | | | |
| DR-4 | 900' Down Current from point of dredging | | | | | | |
| | | | | | | | |
| Rx | Indicates a Re-Test where (x) is the Re-Test number for that particular point | | | | | | |

Project Name/Location:

Contract Number: W9127N-05-C-0012

Columbia River Channel Improvement - RM 95+00-104+20.

Date: 11/23/2005

| <div>Dredging</div> <div>Load Number</div> <div>1377</div> <div>Tidal Stage</div> <div>Ebb</div> <div>Dredge State:</div> <div>Overflow through skimmers only</div> <div>Weather:</div> <div>Clear</div> <div>Wind:</div> <div>0-5 kts</div> <div>Seas:</div> <div>0-1'</div> <div>Disposal location</div> <div>Columbia River RM 101</div> | Sample Point | Depth (ft) | Time | X Coordinate | Y Coordinate | Turbidity (NTU) | DO (Mg/L) |
|---|---|------------|----------|---|--------------|----------------------|--|
| | DR-1 | 20.5 | 12:42:14 | 7633674.50 | 727566.58 | 4.1 | |
| | DR-2 | 20.7 | 12:43:28 | 7633321.83 | 727922.81 | 14.6 | 13.8 |
| | DR-2R1 | 20.5 | 12:43:31 | 7633313.31 | 727923.05 | 14.8 | 13.8 |
| | DR-4 | 20.5 | 12:45:58 | 7632782.44 | 728156.53 | 11.3 | |
| | DR-4R1 | 20.8 | 12:46:01 | 7632778.18 | 728156.64 | 11.0 | |
| | DR-3 | 21.0 | 12:49:22 | 7634190.02 | 727084.30 | 4.4 | |
| Remarks: | | | | Action Taken: | | | |
| DR-2 exceeded 10% over background, taken in the plume. | | | | Re-test DR-2R1 was taken. | | | |
| DR-4 exceeded 10% over background, taken in the plume. | | | | Re-test DR-4R1 was taken. | | | |
| DR-3 taken out of plume, on starboard side. | | | | Re-test DR-3R1 was taken. | | | |
| | | | | The dredge moved away from the area while continuing dredging to avoid further increasing the turbidity at the location where the exceedence was measured. The dredge coordinates were marked on the GPS screen to insure no further dredging occurred at the location where the exceedence was measured. | | | |
| Sample Point Key | All Tests Conducted With YSI 6600 | | | | | Turbidity Compliance | DO Compliance |
| DR-1 | Background - 100' Up Current, Within 600-Foot of Channel | | | | | OR WA WA | OR, WA Not Required Not Required |
| DR-2 | 100' Down Current | | | | | | |
| DR-3 | 300' Radially from point of dredge (Port or Starboard) | | | | | | |
| DR-4 | 900' Down Current from point of dredging | | | | | | |
| | | | | | | | |
| Rx | Indicates a Re-Test where (x) is the Re-Test number for that particular point | | | | | | |

Project Name/Location:

Contract Number: W9127N-05-C-0012

Columbia River Channel Improvement - RM 95+00-104+20.

Date: 11/23/2005

| <div>Dredging</div> <div>Load Number</div> <div>1378</div> <div>Tidal Stage</div> <div>Ebb</div> <div>Dredge State:</div> <div>Overflow through skimmers only</div> <div>Weather:</div> <div>Clear</div> <div>Wind:</div> <div>0-5 kts</div> <div>Seas:</div> <div>0-1'</div> <div>Disposal location</div> <div>Columbia River RM 101</div> | Sample Point | Depth (ft) | Time | X Coordinate | Y Coordinate | Turbidity (NTU) | DO (Mg/L) |
|---|---|------------|----------|---|--------------|----------------------|--|
| | DR-1 | 19.8 | 14:26:53 | 7635254.63 | 726252.59 | 4.2 | |
| | DR-3 | 21.4 | 14:28:30 | 7634604.12 | 726635.21 | 11.3 | |
| | DR-3R1 | 21.4 | 14:28:33 | 7634599.86 | 726635.32 | 11.0 | |
| | DR-2 | 19.2 | 14:29:32 | 7634546.96 | 727038.01 | 7.5 | 13.5 |
| | DR-2R1 | 19.0 | 14:29:35 | 7634542.70 | 727038.13 | 7.0 | 13.5 |
| | DR-4 | 19.6 | 14:31:04 | 7633819.29 | 727404.54 | 10.5 | |
| | DR-4R1 | 19.3 | 14:31:06 | 7633815.20 | 727410.73 | 10.4 | |
| Remarks: | | | | Action Taken: | | | |
| DR-2 exceeded 10% over background, taken in the plume. | | | | Re-test DR-2R1 was taken. | | | |
| DR-4 exceeded 10% over background, taken in the plume. | | | | Re-test DR-4R1 was taken. | | | |
| DR-3 exceeded 10% over background, taken out of plume, on starboard side. | | | | Re-test DR-3R1 was taken. | | | |
| | | | | The dredge moved away from the area while continuing dredging to avoid further increasing the turbidity at the location where the exceedence was measured. The dredge coordinates were marked on the GPS screen to insure no further dredging occurred at the location where the exceedence was measured. | | | |
| Sample Point Key | All Tests Conducted With YSI 6600 | | | | | Turbidity Compliance | DO Compliance |
| DR-1 | Background - 100' Up Current, Within 600-Foot of Channel | | | | | OR WA WA | OR, WA Not Required Not Required |
| DR-2 | 100' Down Current | | | | | | |
| DR-3 | 300' Radially from point of dredge (Port or Starboard) | | | | | | |
| DR-4 | 900' Down Current from point of dredging | | | | | | |
| | | | | | | | |
| Rx | Indicates a Re-Test where (x) is the Re-Test number for that particular point | | | | | | |

Project Name/Location:

Contract Number: W9127N-05-C-0012

Columbia River Channel Improvement - RM 95+00-104+20.

Date: 11/23/2005

| Dredging Load Number 1379 Tidal Stage Ebb Dredge State: Overflow through skimmers only Weather: Clear Wind: 0-5 kts Seas: 0-1' Disposal location Columbia River RM 101 | Sample Point | Depth (ft) | Time | X Coordinate | Y Coordinate | Turbidity (NTU) | DO (Mg/L) |
|--|--------------|------------|----------|--------------|--------------|-----------------|-----------|
| | DR-1 | 21.0 | 15:56:39 | 7634055.33 | 727148.79 | 4.6 | |
| | DR-3 | 20.8 | 15:58:12 | 7633726.05 | 727425.34 | 4.1 | |
| | DR-2 | 18.8 | 15:59:14 | 7633618.35 | 727695.79 | 14.6 | 13.1 |
| | DR-2R1 | 18.0 | 15:59:18 | 7633618.35 | 727695.79 | 10.9 | 13.1 |
| | DR-4 | 20.4 | 16:00:56 | 7633085.72 | 728020.50 | 5.6 | |
| | DR-4R1 | 20.4 | 16:00:59 | 7633077.20 | 728020.74 | 5.8 | |

| Remarks: | Action Taken: |
|--|---|
| DR-2 exceeded 10% over background, taken in the plume. | Re-test DR-2R1 was taken. |
| DR-4 exceeded 10% over background, taken in the plume. | Re-test DR-4R1 was taken. |
| DR-3 taken out of plume, on starboard side. | |
| | The dredge moved away from the area while continuing dredging to avoid further increasing the turbidity at the location where the exceedence was measured. The dredge coordinates were marked on the GPS screen to insure no further dredging occurred at the location where the exceedence was measured. |

| Sample Point Key | All Tests Conducted With YSI 6600 | Turbidity Compliance | DO Compliance |
|------------------|---|----------------------|--|
| DR-1 | Background - 100' Up Current, Within 600-Foot of Channel | OR WA WA | OR, WA Not Required Not Required |
| DR-2 | 100' Down Current | | |
| DR-3 | 300' Radially from point of dredge (Port or Starboard) | | |
| DR-4 | 900' Down Current from point of dredging | | |
| | | | |
| Rx | Indicates a Re-Test where (x) is the Re-Test number for that particular point | | |